

Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife
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Eastern Silvery Minnow

Hybognathus regius

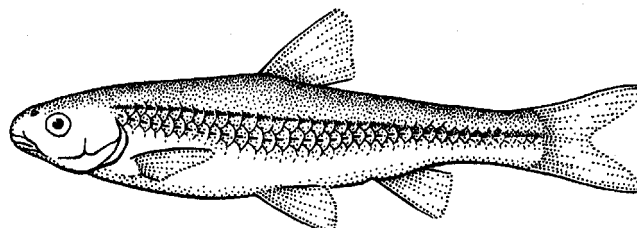
State Status: **Special Concern**

Federal Status: None

Description: The Eastern Silvery Minnow is a rather stout shiner that is generally around 76 to 127 mm in length. It can best be distinguished by the following combination of characters: small, slightly subterminal mouth; lower jaw with a fleshy knob at the tip; black peritoneum (lining of body cavity); long coiled intestine; complete lateral line; and 38-40 lateral line scales. The black peritoneum and the coiled intestine can sometimes be seen through the belly wall. This species is silvery in color and lacks distinctive color patterns.

Habitat: The Eastern Silvery Minnow is found in shallow areas of large, slow-moving rivers over substrates of sand and mud or sand and gravel. They are often found in habitats such as oxbows and quiet pools. Currently, there are only two known populations of Eastern Silvery Minnow in Massachusetts, both found in the Connecticut River.

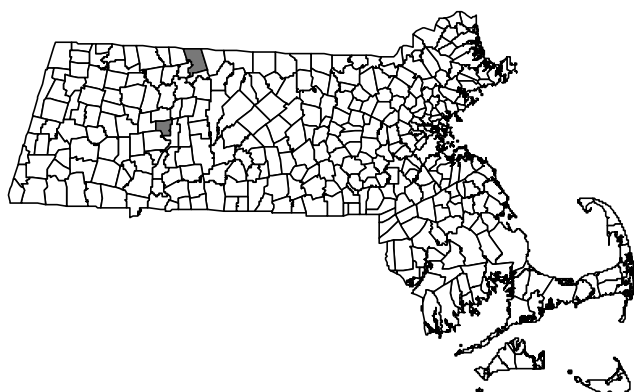
Food: No detailed food studies have been conducted, but algae and organic matter filtered from bottom ooze have been found in their stomachs. The filtering of the bottom ooze is achieved by the specialized pharyngeal apparatus (bony toothlike projections on the fifth gill arch) and long intestine. A variety of larger fish likely feed on this species, especially those in similar habitats such as pickerel and northern pike.



Drawing by Laszlo Meszoly, from Hartel et al. 2002. Inland Fishes of Massachusetts.

Life History: The Eastern Silvery Minnow has a life span of only about 3 years and becomes sexually mature in their second year. Spawning occurs in spring, April and May, when water temperatures are between 10 and 20°C. Spawning takes place in well vegetated backwaters or slow-moving, lower reaches of tributary streams. Spawning is communal and demersal (sinking), nonadhesive eggs are laid over bottom ooze. Spawning only occurs during daylight hours. Eggs hatch in only 6 to 7 days in water temperatures of 13 to 20°C. By early August, young of the year can reach 40 mm in length. Little is known about this species in Massachusetts.

Threats: Habitat alterations due to increased turbidity, erosion and sedimentation, flow alterations, and pollution are major threats to the Eastern Silvery Minnow. They use aquatic vegetation as habitat and increased turbidity and sedimentation can impact the growth of aquatic vegetation. In addition sedimentation may cover over quality organic matter that they use for food. Flow alterations can degrade backwater areas critical for spawning.



Distribution in Massachusetts
1977 - 2002

Based on records in Natural Heritage Database

Breeding Season

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.

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